Feed the Future Innovation Lab For *Collaborative Research on Nutrition* - Asia Johns Hopkins Bloomberg - Annual Report - Year 3

Feed the Future Innovation Lab

For Collaborative Research on Global Nutrition

ANNUAL REPORT
Johns Hopkins Bloomberg School of Public Health (JHBSPH)
Year 3 (2012/2013) CORE & RFA Activities: Nutrition Innovation Lab – Asia

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Overall Objective: Build capacity and conduct research to evaluate agricultural and nutrition interventions whose delivery and integration may help communities and households be more food secure, better nourished and healthier early and later in life.

Proposed and Actual Activity as per the Year 3 Work Plans

Section 1: Research Activities

Objective 1. Organize an annual scientific symposium or "evidence summit" to facilitate the rapid sharing of research findings and innovative solutions, stimulate cross-dialogue among researchers and program implementers from agricultural, food security, health and nutrition sectors in Nepal.

PROPOSED	ACTUAL
• Draft and distribute symposium announcement and request for abstracts from key nutrition, agriculture, food security researchers and research institutions working in Nepal. • Conduct symposium. • Draft, translate and distribute proceedings both in English and Nepali.	• Organized and conducted a two-day, abstract-based Scientific Symposium entitled, "Science and Policy for Health, Agriculture, Nutrition & Economic Growth" on August 13th & 14th, 2013 co-hosted by Nepal's Institute of Medicine, the National Agricultural Research Council and Johns Hopkins University. This year the Symposium included a two multi-sectoral panels during the plenary session and during a session entitled 'National Policy Reponses to "the science."' There were 18 oral presentations on Nepal-based and/or relevant research and 10 poster presentations. The Symposium was attended by 220+ participants on both days by Government of Nepal (GON) officials, Nepal academia (from the faculties of community medicine, public health, agriculture and veterinary science), policy makers, INGOs, development partners and international experts.

- Materials and presentations from the Symposium are available on the Nutrition Innovation Lab website.
- Proceedings of the Symposium are currently being drafted as the event took place in August 2013 and will be published and distributed by the end of October 2013.
- A Symposium brief is being prepared for submission to the Journal of Agricultural Economics, a Nepali journal.

Lessons Learned

- There is a growing interest in this area of research, as evidenced by more than double the number of participants attending the events. Plans to ensure adequate space and accommodation for interested participants in the future have been made.
- Due to time constraints, engaging co-hosts in a meaningful way remains to be a challenge despite their commitment and interest in serving as co-hosts of the event.
- Allocating time for poster presentations facilitated a more meaningful and engaged interaction between the audience and poster presenters.
- Engaging high-level policy makers from the Ministry of Health & Population (MoHP), Ministry of Agriculture (MoAC), and National Planning Commission (NPC) at the secretary/joint-secretary level created a lasting impression on the audience because of the audience's diversity. Students and Nepali academia aside from the International Non-governmental Organization, Non-governmental Organization and development partner communities were able to have candid discussions about agriculture's role in improving nutrition, the type of science that would contribute to understanding this and current policies and multi-sectoral programming taking place in Nepal.
- Abstract-based selection of oral presentations continues to be the best method of screening relevant and higher-quality research.

Solutions/Resolutions

- Continue organizing annual symposiums that bring together stakeholders in the agriculture and health and nutrition sectors interested in sharing relevant research on the linkages between agriculture and nutrition in 2014 in continued partnership with International Organization for Migration (IOM) and Nepal Agricultural Research Council (NARC). Identifying key faculty within IOM and NARC to be part of the abstract selection committee will further engage co-hosts and ground Nepali academics in this stock-taking exercise of the available literature on the ag-nutrition pathway.
- Next year, a strict format for posters will be enforced to allow for the content of the posters to be evaluated for their scientific rigor.
- In the future, a suggestion from the audience that we anticipate following up on is engaging other stakeholders from the Ministry of Education, the Ministry of Local Development and other concerned ministries engaged in Nepal's Multi-Sectoral Nutrition Plan during policy panel sessions.
- There may be utility in the years to come to have a one or two day pre-symposium workshops with abstract presenters in Kathmandu, as a capacity-building activity, to review final presentations, recommend improvements in how methods, results and conclusions are presented and develop and ensure

presentation cohesiveness within each symposium session

Objective 2. Disseminate research findings from dietary intake, nutritional status, and nutrition intervention studies in policy-friendly formats.

PROPOSED	ACTUAL
• Finalize and distribute three Research-to-Action briefs that have been drafted. • Draft and distribute an additional three Research-to-Action briefs.	• Four Research-to-Action briefs were drafted highlighting Nepal Nutritional Intervention Project-Sarlahi (NNIPS) research findings relevant to Nutrition Collaborative Research Support Program (NCRSP) objectives, but need to be modified before publication. • A research brief describing the Policy and Science for Health and Nutrition (PoSHAN) Community Studies activity was drafted, published and disseminated during the August 2013 Scientific Symposium.

Lessons Learned

- With limited staff in the beginning of Year 3 and with the startup of PoSHAN Community Study sites in 21 districts, these briefs were difficult to prioritize. However, they continue to appear to be an excellent method to disseminate policy-relevant research.

Solutions/Resolutions

- Plans include research-policy briefs as an output for research assistant and interns engaged in the Nutrition Innovation Lab for the year to come.
- Publish five research-to-action briefs during Year 4.

Objective 3. Conduct annual panel survey to serve as the first round of data collection for the NCRSP/JHU (Johns Hopkins University) research.

PROPOSED	ACTUAL
• Identify and setup a Kathmandu office. • Recruit administrative and research team staff for NCRSP Kathmandu office. • Create training schedule and manual. • Purchase equipment required for annual survey (height boards, Hemocue machines, tape measures, calipers, scales). • Conduct training for data collection teams with survey firm selected. • Conduct data collection for annual survey.	**Setup of Nutrition Innovation Lab/JHU Office & Personnel** • Recruitment and hiring of a Senior Field Manager, Research Assistants, Public, Finance/Administrative Officer, Database Programmer among other consultative staff has been completed. • Training for staff hired conducted and continues on an “as needed” basis. • Identified and setup office in Oasis Complex, Patan Dhoka. • All equipment required for annual panel survey: micro cuvettes, salt testing kits, lancets, tape measures, etc. have been procured.

• Initiate and complete data cleaning, checking and entry process. • Analyze data from annual panel survey. • Commence paper-writing for data collected from annual survey well as the identification of field sites.	**PoSHAN Community Studies** • Request for proposals released and competitive selection of data collection firm completed in October 2013–New ERA Pvt. Ltd. • Development, vetting and finalization of data collection tools for PoSHAN Community Studies. • Pre-testing of data collection tools completed in the Sunsari and Dhading districts and revisions to questionnaires completed. • Ethical clearance from Nepal Health Research Council completed. • Four weeks of training and standardization of 90+ data collectors in collaboration with New ERA. • Data collection began in May 2013 for first annual panel survey in 21 districts of Nepal in the mountains, hills and terai, and was completed in August 2013. • Quality assurance visits to more than 15 districts completed by Nutrition Innovation Lab/JHU staff and to all districts by New ERA staff. • Preliminary data reviewed–frequency distributions completed. • Received final data from New ERA in September 2013, data transferred and converted to SQL database, checked and frequency distributions completed. • Analytical plans for the first set of papers characterizing PoSHAN Community Studies' mother and < 5 children population's nutrition status and dietary patterns completed.

Lessons Learned

- The cost of office space in the Kathmandu valley has drastically increased, along with longer hours of load shedding (power cuts) over the past two years, thus making it essential to have reliable generators and uninterrupted power supply (UPS) devices.
- It has been highly valuable working through and with a research firm like New ERA to hire data collectors, implement data collection, and provide the logistical support required for this activity.
- Conducting this national study across diverse terrains just before and during the monsoon season has been challenging. The size of the study also warranted a large staff of 96 data collectors. Training and standardizing data collection methods (especially standardizing anthropometric measurements) was a difficult task despite it ultimately being accomplished.

- Mandating structure, quality and providing detailed and specific instructions for training, data management and quality control procedures to subcontracting firms during the initial and planning stages of the annual panel survey carried the project a long way to ensure that protocol was followed. Delays occurred as a result of this, however, quality of data and structure of the project was able to be maintained.

- Since land measurements vary across agro-ecological zones, there exists a need to document these measurements within each zone and to standardize them across zones to ensure accurate measurements are used during analysis of the data.

- Overall, there is a very low refusal rate across all 21 sites. The interviews however, due to their comprehensive nature, are rather long (2.5-3.5 hours to interview a complete household, which includes household interview, women and children interviews). Long interviews allow for fewer to be done a day and brings up the issue of interviewee fatigue and whether the small token offered (toothbrush/toothpaste set for children and soaps for the household) is adequate in the long run.

Solutions/Resolutions

- An office building with several other United States Agency for International Development (USAID) projects running within its premises was identified as the Kathmandu office for the Nutrition Innovation Lab/JHU office to accommodate a staff of eight full-time members and one part-time staff member. It will soon also contain the server that will house the PoSHAN Community Studies database. The building is fitted with a generator and UPS devices have been procured for the office.

- Continue working with New ERA to carry out the annual surveys for the PoSHAN Community Studies.

- Plan for a field departure date of May 1st to ensure that data collection takes place during the same season but that heavy rainfall, to the extent possible, is avoided.

- Complete editing and translation of all survey documents—training manuals, manual of operations and questionnaires—by February 2013 and have adequate (two to three) meetings with the New ERA core field staff to review materials together instead of doing this separately with different members of the team.

- Complete standardization exercises for anthropometry earlier in the training to allow sufficient time for retraining staff as needed (this was done during Year 2, however training time was lengthened).

- Standard land measurement forms were developed and are being used to document how land measurement is completed in each of the sites. Supervisors document this by engaging agricultural experts (agricultural extension workers/ expert farmers). A record is maintained and conversions are completed during data entry and analysis.

- Ongoing discussions about questionnaires and ensuring community engagement in the research continue. Simple pamphlets with research findings are planned to be developed for distribution to the community during dissemination efforts.

Objective 3. Conduct data collection in identified sentinel sites to provide seasonal and detailed information about agriculture-program-household dynamics that may affect diet and nutritional status of families.

PROPOSED	ACTUAL
• Embed Nepali Technical Assistance Group (NTAG) QC staff into survey data collection teams to conduct a formal evaluation of district town size, Village Development Committee (VDC) access, facilities, logistics, taking digital photographs, etc. in collaboration is key. Key contacts at the district and VDC sites will also be noted. • Identify 3 VDCs to serve as surveillance sites. • Set up 3 VDC surveillance site offices. • Recruit VDC level data collection and supervisory staff for surveillance sites. • Conduct 2 rounds of seasonal data collection in selected surveillance sites.	• One sentinel VDC (3 wards each) was selected from each of three zones (mountains, hills and terai), based on average comparability. We examined extant and publicly available census and other Bureau of Statistics data for the VDC distributions within each zone for population density, age and sex, and other factors. The VDC which most closely approximates the center of these distributions in each zone, considering access, was identified as the sentinel site in the zone. In the end, the sites selected were: Mahatgaun (Jumla), Sitapur (Arghakhanchi) and Saigaun (Banke). • The Senior Field Manager from the Nutrition Innovation Lab and two senior field staff (all hired through NTAG) made field visits to each of the sentinel sites to attain permission from district level officials (the District Health Office, Chief District Officer and District Development Office) to setup the PoSHAN sentinel sites within those districts, advertise for local staff, conduct interviews together with district-level officials to ensure transparency in recruitment procedures and involve district officials. • In total, 29 field staff were recruited for the first round of sentinel site data collection. The increase in staff numbers was due to the imperative need to complete data collection before the 1-2 week-long festival period of Dhasain (early October). • 3 office spaces in each of the sentinel sites have been identified. • Due to delays related to subcontracts being awarded to the annual survey firm, New ERA, a need to review, revise and reformulate questionnaires, among other issues, only one round of sentinel site data collection took place during this fiscal year.

Lessons Learned

- The need to engage district level officials and ensure their buy-in to the research is invaluable. To a large extent, this drives the success of field teams being able to conduct the data collection efficiently.
- It would be best to set up offices when the field teams have been consolidated to three to four people per site who are local and/or relocated to the research sites permanently. This ensures that there will be someone present to check in on the offices even during periods when there is no ongoing data collection.

- Within each community, having data collectors who were residents within the VDC or from the surrounding districts drastically made the rapport-building with the community and data collection teams more seamless.

- There is seasonal migration of residents during certain periods of the year, for example, in Jumla, where residents from lower altitudes of this mountain district, travel further to even higher altitudes to harvest their potato crop. This seasonal migration results in losing a small percentage of households in our longitudinal cohort.

Solutions/Resolutions

- Continue relationship-building efforts with district level officials, plan accompanied monitoring visits by district level officials in sentinel sites, and conduct dissemination activities with key stakeholders at the district level.

- Office leases to commence in December 2013, a month before the second round of sentinel data collection and when data collection teams are consolidated.

- Field team consolidation will take place on the basis of performance but also preference will be given to local staff and/or staff willing to relocate to sentinel sites.

- Make arrangements in the future (budgetary allocations) to contact respondents who may be reached within the district even if they are not currently residing in their home in the sentinel VDC.

Objective 4. Disseminate findings from Year 1 of NCRSP research conducted by JHU to pertinent stakeholders.

PROPOSED	ACTUAL
• Dissemination meeting with key stakeholders (policy makers, program implementers and researchers within national research institutions).	• Dissemination meetings have not yet occurred as the annual survey data was just recently received in September 2013.

Lessons Learned

- Through discussions with previous training candidates, specific procedures were discussed to ensure wide dissemination within the central government offices–specifically to coordinate the event through the Child Health Division, Department of Health.

Solutions/Resolutions

- Dissemination activities with all key stakeholders will take place between December 2013-January 2014 when the first panel survey data are cleaned and analyzed following the procedures recommended by our local counterparts.

Section 2: Capacity Building

Objective 1. Help build the ability to conduct population-based nutrition research.

PROPOSED	ACTUAL
• Provide short-term training in epidemiology, biostatistics and data analysis for a student or faculty member from an academic or research institution at the Johns Hopkins Bloomberg School of Public Health (JHBSPH) Summer Graduate Institute. • Develop as a member of the NCRSP partner team curriculum for a short training course in research methodology to be conducted in Nepal. • One candidate for the summer training program at JHBSPH identified. • One to two candidates identified to visit the Sarlahi district's "living laboratory."	• Identified and trained one Nepali candidate–a junior faculty engaged with teaching and curriculum development from the Institute of Medicine. The candidate attended the three-week Summer Biostatistics and Epidemiology Training Program. • The Nepali candidate identified and supported by the Nutrition Innovation Lab to pursue a Master of Public Health has matriculated from the degree program and now serves as a Public Health Scientist for Nutrition Innovation Lab research activities. • A NTAG staff member was identified as having training needs in anthropometry, anemia testing and a general need for exposure to community research sites. This staff member visited Sarlahi for one week and was provided training and mentoring by senior field supervisory staff.

Lessons Learned

- The short-term epidemiology and biostatistics training continues to be valuable to training candidates. They also are looking forward to applying some of the skills acquired not only to their roles within government/ national academic institutions but also are enthusiastic about contributing to Nutrition Innovation Lab activities such as reviewing abstracts for the Scientific Symposium and potentially performing analyses on some of the PoSHAN Community studies data.
- There is a need to keep track of and stay in contact with alumni of the training programs to engage them on a regular basis–they are a wealth of knowledge and in some cases, belong to or are attached to the stakeholder community which we hope to engage in disseminating our research.

Solutions/Resolutions

- Quarterly meetings with training candidates have been planned–one in August 2013 has already taken place with JHU training candidates and another event was organized by Tufts University for all Nutrition Innovation Lab training candidates in September 2013. Both events were successful and were received positively by candidates.

OUTPUTS:

1. Vetted study protocol & questionnaires for the PoSHAN Community Studies' 1st annual & sentinel surveys
2. NHRC and JHU International Review Boards' approval
3. PoSHAN Community Studies' Training Manual
4. PoSHAN Community Studies' Manual of Operations
5. PoSHAN Community Studies' Anthropometry Standardization Protocol
6. PoSHAN Community Studies' Annual Panel Survey (P1) Data Management Plan

7. PoSHAN Community Studies' Database in SQL
8. PoSHAN Community Studies' Analytic Database in STATA
9. PoSHAN Community Studies' Annual Panel Survey Analysis Plan
10. Scientific Symposium 2013: "Science and Policy for Health, Agriculture, Nutrition & Economic Growth"
11. Proceedings for Scientific Symposium 2013, "Science and Policy for Health, Agriculture, Nutrition & Economic Growth" (being developed)
12. Rajan Paudel, Institute of Medicine (IOM), graduate of the JHBSPH Summer Institute: Epidemiology and Biostatistics Training Program
13. Dr. Raman Shrestha, graduate of the JHBSPH Master of Public Health Program

Vignettes

Year 3 brought with it many lessons learned, mostly related to setting up sites in the field across the varying terrains of Nepal and how best to work through the numerous partners the Nutrition Innovation Lab collaborates with.

Travel to the 21 PoSHAN Community Studies' sites is challenging during data collection due to weather and distance from central locations. However, the establishment of one team of data collectors to a VDC for the duration of the data-collection period for the annual survey has allowed for teams to be embedded in the research sites and resulted in ease of accessing households. As mentioned above, the establishment of local teams for the sentinel sites seems to be the best step forward with regard to increasing community support and engagement in research activities.

There have been several changes within the Child Health Division at the Department of Health with a new Chief of Nutrition, Director and Director General, thus there continues to be a need to build relationships within the GON. With change in project branding, the need to ensure that the project continues to gain visibility with its new branding remains important. It appears, however, that these efforts have mostly been successful with the additions of the Nutrition Innovation Lab representatives in different technical working groups comprised of government officials, development partners and other technical experts who provide input into the development of different nutrition policies. Representatives from the Nutrition Lab have been included in the National Nutrition Surveillance Working Group and the Maternal Nutrition Strategy Working Group and lately, a proposal has been drafted for inclusion of someone from our group in the Multi-Sectoral Information Management and Planning Working Group for MSNP.

Additionally, establishing concrete relationships with clear, delineated tasks for Johns Hopkins' primary partners–NTAG, NNIPS and New ERA–has been a primary focus of the year past. Due to a heavy reliance on each of these organizations to provide Human Resource support, there has been a need to align policies, procedures and protocols for staff hired across these groups for the purpose of working on Nutrition Innovation Lab activities.